IGSC 2020 Panel

Software Energy Efficiency: When Academia Meets Industry

Historically, the high energy efficiency of computing systems was largely achieved by microprocessor innovations. However, as the Moore 's Law approaches its limit and the cost of researching and manufacturing chips rapidly increases, hardware optimization alone is no longer sufficient for sustainable computing. Significant improvements in power-aware algorithms and software optimizations are thus required to advance the green computing frontier. Academia has begun publishing on the concept of energy efficient software development and building prototype systems/platforms/toolkits to support green software design, but industry has not strongly motivated to promote or adopt such practices yet. This panel aims to bring together academics and industry professionals to discuss the current gaps between state-of-the-art research and industry needs, as well as new challenges and opportunities for the future of green software design and development.

Panel Organizer:

Ziliang Zong is an associate professor of the Computer Science Department at Texas State University. He received his Ph.D. degree from Auburn University with the Distinguished Dissertation Award. He studies energy-efficient computing and systems, focusing on green data center, green software design and green AI. He successfully led the development of the Marcher system, the GreenCode platform, and the GreenSoft platform. He regularly serves as NSF panelists, associate editor of the Sustainable Computing Journal, co-chairs and committee members of numerous conferences and workshops, and reviewers for top journals and conferences.

Confirmed Panelists:

Chris Palmisano is technology executive, entrepreneur, advisor, and investor. He is Founding COO at Rocket Dollar, a fintech company in Austin. He previously held leadership roles in sales, marketing, and operations at several technology companies including SolarWinds and Google Cloud. He is a mentor at startup accelerators including Capital Factory and Founder Institute, a guest lecturer, an angel investor, Founding Venture Partner at NextGen Venture Partners, and an advisor to several companies, nonprofits, and academic programs. Chris is a former US Marine Corps communications officer. He holds an MBA in Finance from the University of North Carolina at

Chapel Hill's Kenan-Flagler Business School, an MS in Information Systems from Boston University, and a BS in Information Systems from Rochester Institute of Technology.

Sean Bauld is a corporate decision scientist for competitive market optimization, innovation and disruptive technologies. In addition to being founder, entrepreneur-in-residence, and adviser to transformative companies, he served as head of Market Intelligence for IBM and marketing EVP for Reuters. He studied public/private partnerships at the LBJ School of Public Affairs and holds an MBA from McCombs Graduate School of Business both at UT Austin.

Abram Hindle is an associate professor of Computing Science at the University of Alberta. His research focuses on problems relating to mining software repositories, improving software engineering-oriented information retrieval with contextual information, the impact of software maintenance on software energy consumption, and how softw are engineering informs computer music. He likes applying machine learning in music, art, and science. Abram received a PhD in computer science from the University of Waterloo, and Masters and Bachelors in Computer Science from the University of Victoria.

João Saraiva is an associate professor at the Departmento de Informática, Universidade do Minho, Braga, Portugal, and a senior researcher member of HASLab/INESC TEC. He obtained a MSc degree from University do Minho in 1993 and a Ph.D. degree in Computer Science from Utrecht University in 1999. His main research contributions have been in the field of programming languages design and implementation, program analysis and transformation, and functional programming.